

EXHIBIT A

**UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF OHIO
EASTERN DIVISION**

**IN RE NATIONAL PRESCRIPTION
OPIATE LITIGATION**

This document relates to:

Case No. 17-OP-45004 (N.D. Ohio)

THE COUNTY OF CUYAHOGA, OHIO, et al.,

Plaintiffs,

vs.

PURDUE PHARMA L.P., et al.

Defendants.

Case No. 17-OP-45090 (N.D. Ohio)

THE COUNTY OF SUMMIT, OHIO, et al.,

Plaintiffs,

vs.

PURDUE PHARMA L.P., et al.

Defendants.

MDL No. 2804

Case No. 17-md-2804

Judge Dan Aaron Polster

CONFIDENTIAL

EXPERT REPORT OF M. LAURENTIUS MARAIS, Ph.D.

May 10, 2019

C. OARRS data from the Ohio Board of Pharmacy shows a low rate of involvement of Janssen opioids in “doctor shopping”

43. In the course of my work on this matter I received data from the Ohio Automated Rx Reporting System (OARRS) for the period 2008–2018.³¹ Counsel for Janssen asked me to analyze the OARRS data for indications of “doctor shopping” involving three pertinent Janssen opioids: Duragesic, Nucynta, and Nucynta ER.

44. I understand that the State of Ohio defines a doctor shopper as a patient filling prescriptions for opioids from five or more prescribers at five or more pharmacies in a single month.³² For the analysis I report here I defined as an episode of doctor shopping any instance of a single patient filling prescriptions for opioids from five or more distinct prescribers within a 30 day window. Because this definition does not consider the number of distinct pharmacies filling the prescriptions, such episodes would be not recognized as doctor shopping by the State of Ohio. Thus, the definition I adopt here is conservative compared to that of the State of Ohio for the purpose of tallying doctor shopping episodes.

45. Based on this conservative definition, my analysis of the OARRS data—which is summarized in Table 2 below—reveals very little involvement of Duragesic, Nucynta, and Nucynta ER in doctor shopping. Specifically, out of 55,594 prescriptions for Duragesic, Nucynta, and Nucynta ER in the OARRS data, I identified only 154, or 0.28% ($= 154 / 55,594$), as being involved in a doctor shopping episode. These 154 prescriptions represent 0.13% ($= 154 / 114,870$) of all prescriptions involved in a doctor shopping episode. The corresponding percentages for Duragesic prescriptions alone were 0.31% ($= 39 / 12,636$) and 0.034% ($= 39 /$

³¹ Ohio Automated Prescription Reporting System is created by the State of Ohio Board of Pharmacy. OARRS collects information on all outpatient prescriptions for controlled substances. <https://www.ohiopmp.gov>.

³² “Doctor Shopper=Patient filling prescriptions for 5+ prescribers at 5+ pharmacies in 1 month.” See www.ohiopmp.gov/State.aspx (accessed May 3, 2019).

114,870); for Nucynta alone 0.28% (= 103 / 37,022) and 0.09% (= 103 / 114,870); and for Nucynta ER alone 0.20% (= 12 / 5,936) and 0.01% (= 12 / 114,870).

Table 2
Ohio Automated Rx Reporting System (OARRS) Data 2008–2018

Prescriptions with Indications of “Doctor Shopping”

	Prescriptions Involved in Doctor Shopping	Total Prescriptions (by Drug)	Percent of Total Prescriptions	Total Prescriptions Involved in Doctor Shopping (All Labelers)	Percent of Total Prescriptions Involved in Doctor Shopping
Janssen Drugs					
Duragesic	39	12,636	0.309%	114,870	0.034%
Nucynta IR	103	37,022	0.278%	114,870	0.090%
Nucynta ER	12	5,936	0.202%	114,870	0.010%
Total	154	55,594	0.277%	114,870	0.134%

Patients with Indications of “Doctor Shopping”

	Patients Involved in Doctor Shopping	Total Patients (by Drug)	Percent of Total Patients	Total Patients Involved in Doctor Shopping (All Labelers)	Percent of Total Patients Involved in Doctor Shopping
Janssen Drugs					
Duragesic	26	1,528	1.702%	10,401	0.250%
Nucynta IR	67	9,972	0.672%	10,401	0.644%
Nucynta ER	6	1,121	0.535%	10,401	0.058%
Total	97	12,083	0.803%	10,401	0.933%

46. Viewed alternatively in terms of the patients (rather than prescriptions) involved in doctor shopping episodes, the OARRS data again reveals very little involvement of Duragesic, Nucynta, and Nucynta ER in doctor shopping. Out of 12,083 patients who filled at least one prescription for Duragesic, Nucynta, or Nucynta ER, I identified only 97, or 0.80% (= 97 / 12,083), as being involved in a doctor shopping episode. These 97 patients represent 0.93% (= 97 / 10,401) of all

patients involved in a doctor shopping episode. The corresponding percentages for patients who filled at least one Duragesic prescription were 1.70% ($= 26 / 1,528$) and 0.25% ($= 26 / 10,401$); for Nucynta 0.67% ($= 67 / 9,972$) and 0.64% ($= 67 / 10,401$); and for Nucynta ER 0.54% ($= 6 / 1,121$) and 0.058% ($= 6 / 10,401$).

III. Conclusion

47. In sum, the process through which Dr. Rosenthal developed the regression models proffered in her report provides no assurance that these models are capable of measuring reliably the effect on the quantity of MMEs dispensed at retail of the Conduct.

48. The opinions I have reached in this case to date are based on information, data, and analyses of the types typically and reasonably relied upon by experts in my areas of expertise. In particular, my opinions are based on my background, knowledge, and experience in applied mathematics and statistics. I hold each of the opinions expressed in this report to a reasonable degree of scientific certainty. I may do additional work and I may revise or refine my opinions in light of additional information or analyses. In particular, I received the transcript of Dr. Rosenthal's recent deposition in this matter only three days ago and have not yet had the opportunity to review it fully. More generally, I understand that I may be asked to assess and respond to opinions or exhibits that may be offered by the parties at or before trial.

M. L. Marais

M. Laurentius Marais, Ph. D.